

EXHIBIT 21

Certificate of Registration



This Certificate issued under the seal of the Copyright Office in accordance with title 17, *United States Code*, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

Maria A. Pallante

Register of Copyrights, United States of America

Registration Number
TX 7-933-364

**Effective date of
registration:**

November 14, 2014

Title

Title of Work: Cisco IOS XR version 4.3
Previous or Alternative Title: Cisco IOS XR 4.3
 Cisco IOS XR Release 4.3
 Cisco IOS XR Software Release 4.3
 Cisco IOS XR Software Version 4.3
 Cisco Internetwork Operating System version XR version 4.3
 Cisco Internetwork Operating System XR release 4.3

Completion/Publication

Year of Completion: 2012
Date of 1st Publication: December 21, 2012 **Nation of 1st Publication:** United States

Author

■ **Author:** Cisco Systems, Inc.
Author Created: text, computer program

Work made for hire: Yes

Citizen of: United States

Domiciled in: United States

■ **Author:** Bard na nGleann
Author Created: text

Work made for hire: Yes

Citizen of: Ireland

Domiciled in: Ireland

■ **Author:** HCL Technologies Limited
Author Created: text, computer program

Work made for hire: Yes

Citizen of: India

Domiciled in: India

■ **Author:** Nichepro Consulting Private Limited

Author Created: text

Work made for hire: Yes

Citizen of: India

Domiciled in: India

■ **Author:** Innovatia, Inc.

Author Created: text

Work made for hire: Yes

Citizen of: Canada

Domiciled in: Canada

■ **Author:** Abacus Business Solutions, Inc.

Author Created: computer program

Work made for hire: Yes

Citizen of: United States

Domiciled in: United States

■ **Author:** Aricent Technologies Mauritius Limited

Author Created: computer program

Work made for hire: Yes

Citizen of: Mauritius

Domiciled in: Mauritius

■ **Author:** Ensoft Limited

Author Created: computer program

Work made for hire: Yes

Citizen of: United Kingdom

Domiciled in: United Kingdom

■ **Author:** Infosys Technologies Ltd.

Author Created: computer program

Work made for hire: Yes

Citizen of: India

Domiciled in: India

■ **Author:** Wipro Limited

Author Created: computer program

Work made for hire: Yes

Citizen of: India

Domiciled in: India

■ **Author:** Tech Mahindra Limited

Author Created: computer program

Work made for hire: Yes

Citizen of: India

Domiciled in: India



■ **Author:** QNX Software Systems Co.

Author Created: computer program

Work made for hire: Yes

Citizen of: Canada

Domiciled in: Canada

Copyright claimant

Copyright Claimant: Cisco Technology, Inc.

170 W. Tasman Drive, San Jose, CA, 95134, United States

Transfer Statement: By written agreement

Limitation of copyright claim

Material excluded from this claim: Prior works by claimant and preexisting third party computer code

Previous registration and year: TXu1-592-305 2007

New material included in claim: New and revised computer code and accompanying documentation

Certification

Name: Joshua L. Simmons, Esq.

Date: November 12, 2014

Applicant's Tracking Number: 41593-0036

Registration #: TX0007933364

Service Request #: 1-1879984622



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